

Exhibit 10: Measurements Demonstrating Conformance to 97.307 and 97.317

External Radio Frequency Power Amplifier ACOM 600S

Model 600S

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Measurements Demonstrating Conformance to 97.307 and 97.317

97.317(a)(1)(2)&(3) & 97.317(b). Spurious Emissions per 97.307(d) and Gain versus Frequency.

Results reflect amplifier as shipped with 26 and 28MHz frequency bands disabled.

Amplifier under test operated at frequency f1 with CW (A1A) excitation. Spectrum analyzer with a 30dB input attenuator was used to observe all frequencies, from f1 through at least 10f1 for harmonic and spurious emissions.

Power Gain per 97.317-(a) (1) (2) (3)				Spurious emissions per 97.307 (d) (e)			
Frequency f ₁ , MHz	Input Power, W	Output Power, W	Amplifier Gain, dB	2f1, dBc	3f1, dBc	(4-10)f1, dBc worst case	
1.800	23.9	600	14.0	-65	-77	Better than -77dBc	
3.500	20.5	600	14.7	-77	-82	Better than -74dBc	
7.100	23.4	600	14.1	-77	-79	Better than -85dBc	
10.125	22.1	600	14.3	-86	-81	Better than -73dBc	
14.350	20.0	600	14.8	-70	-62	Better than -70dBc	
18.100	27.0	600	13.5	-94	-61	Better than -70dBc	
21.200	22.9	600	14.2	-98	-62	Better than -67dBc	
24.900	20.1	600	14.7	-71	-74	Better than -70dBc	
28.800	19.6	600	14.8	-77	-73	Better than -69dBc	
52.000	24.6	600	13.9	-89	-77	Better than -70dBc	
Amplifier was not capable of operation on any frequency or frequencies between 26 and 28MHz as measured at the points below per 97.317-(a) (3). Data for: amplifier in Stand-by / amplifier ON.							
26.000	100	100	0.0	-	-	-	
27.000	100	100	0.0	-	-	-	
28.000	100	100	0.0	-	-	-	

Table 1 Spurious emissions

To meet the requirements of 97.317(b), the equipment employs internal electrical lock-out means. Electrical lock-out ensure that the 26-28 MHz band cannot be operated.

97.307(a)(b). Intermodulation & Linearity

Exciter operating in SSB mode with two equal-tone audio applied to the microphone input. Amplifier under test driven to 600W PEP output at the center of the band with 24W PEP input power.

Intermodulation in dB relative to 600W PEP per 97.307(a)(b)						
Order:	D3	D5	D7 and higher			
Freq. (MHz)	dB	dB	dB			
1.800	-38	-47	-66			
3.500	-41	-38	-57			
7.100	-36	-39	-58			
10.100	-41	-39	-51			
14.350	-56	-42	-53			
18.100	-29	-35	-43			
21.200	-31	-37	-47			
24.900	-29	-41	-44			
28.800	-29	-43	-47			
52.000	-30	-45	-56			

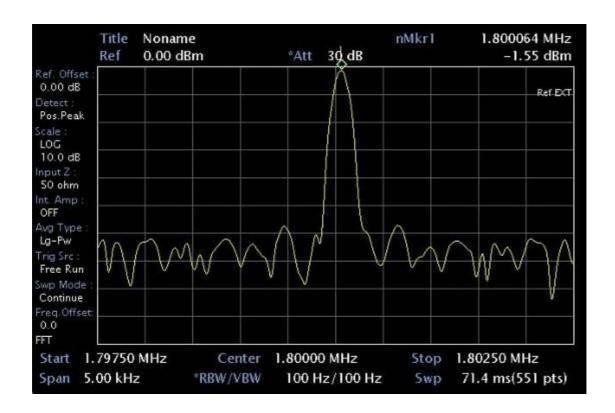
97.317(a)(1). When the amplifier is in the "standby" or "off" positions, but still connected to the exciter, no measurable spectrum change from the normal output of the exciter is detectable with the spectrum analyzer (noise floor approximately –105dBc) when amplifier is driven with 0 to 100 W mean RF power.

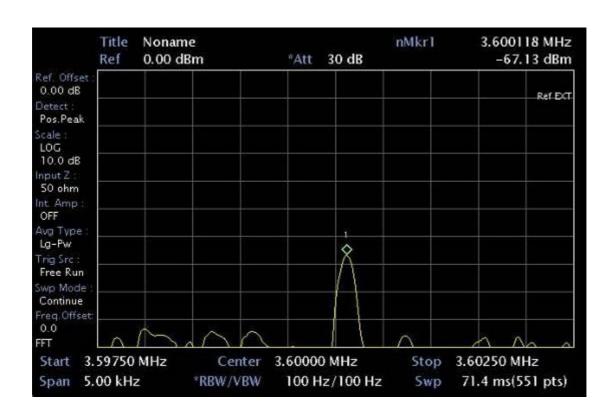
97.317(b). The amplifier possesses none of the prohibited characteristics listed in this section.

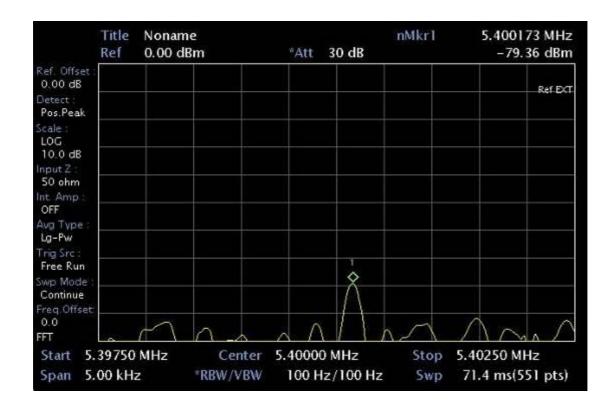
97.317(a)(2). The amplifier gain does not exceed 15 dB for any level of input signal.

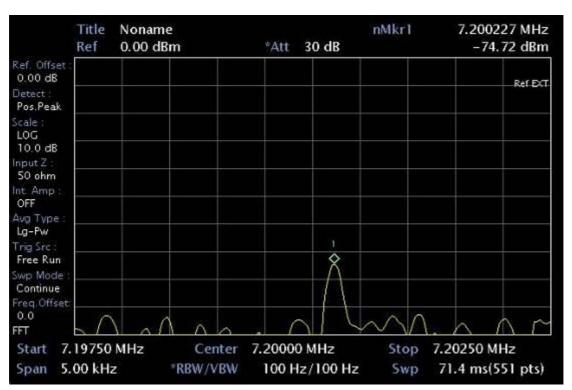
Additional data: Information and data supplied by transistors manufacturer concerning MRFE6VP6300 LDMOS is available by request from the manufacturer.

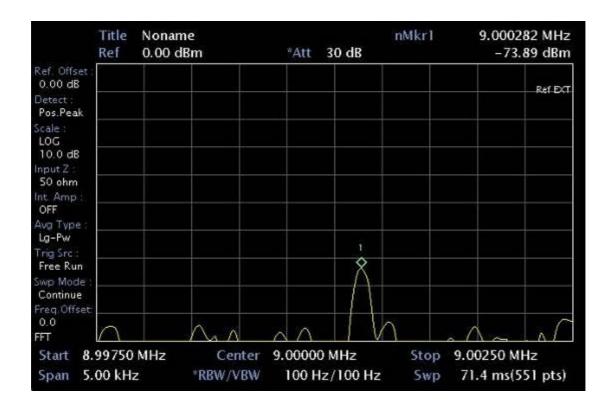
Spurious emissions 1,8MHz

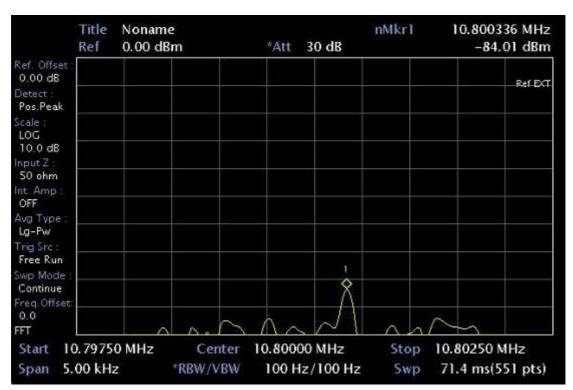


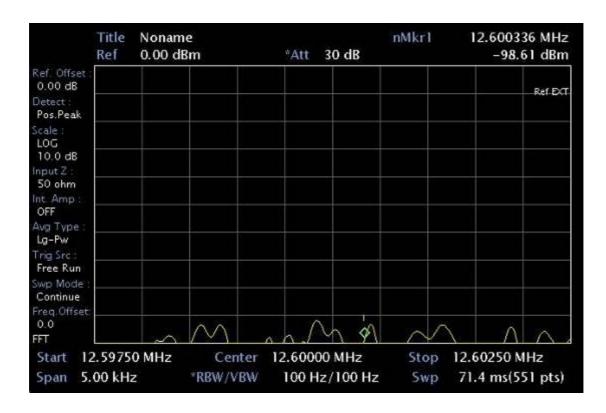


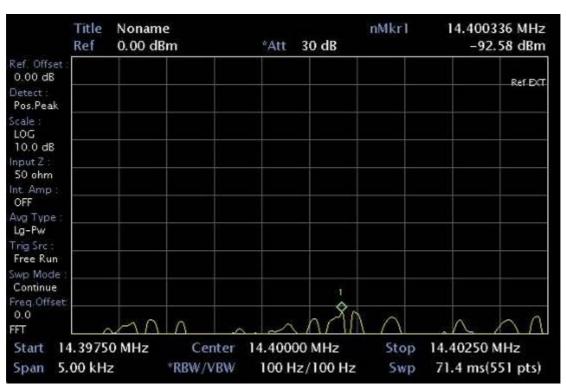


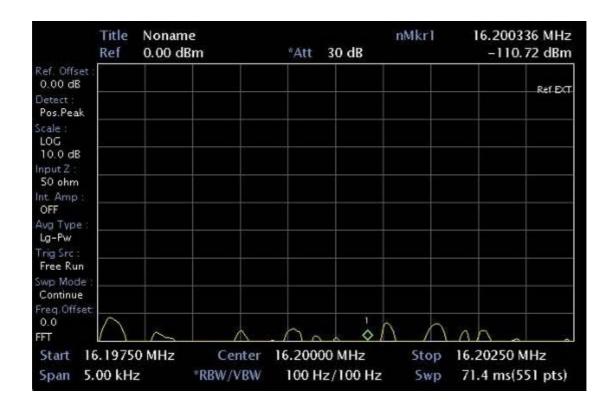


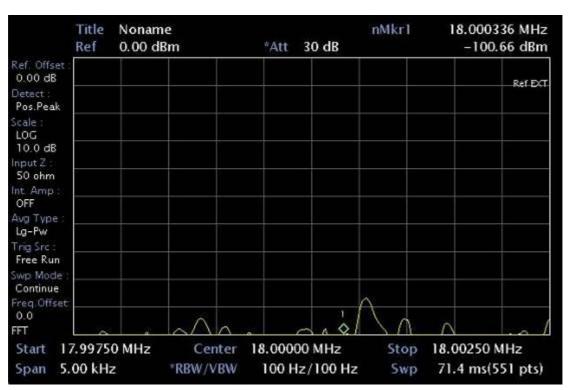




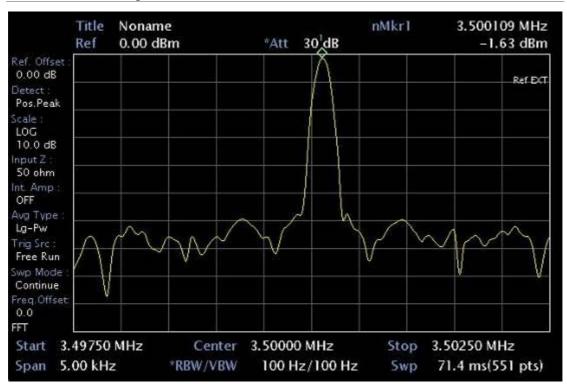


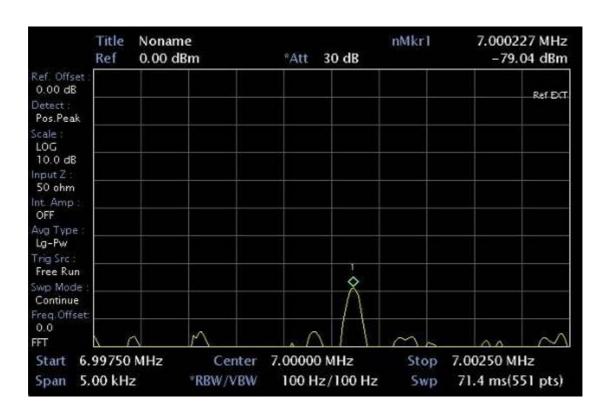


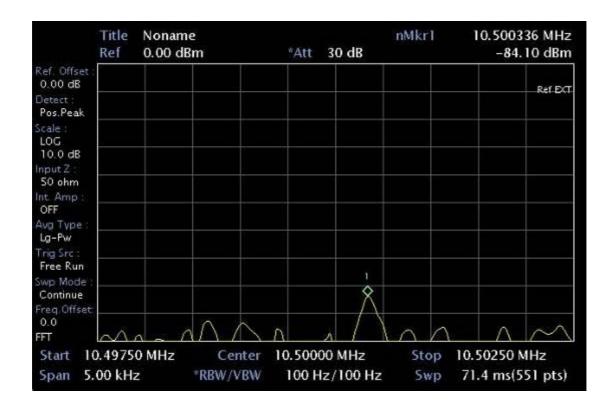


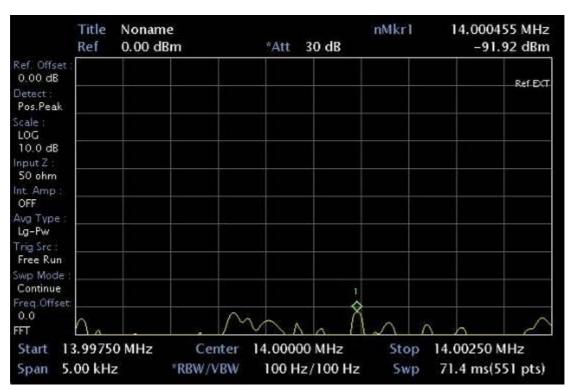


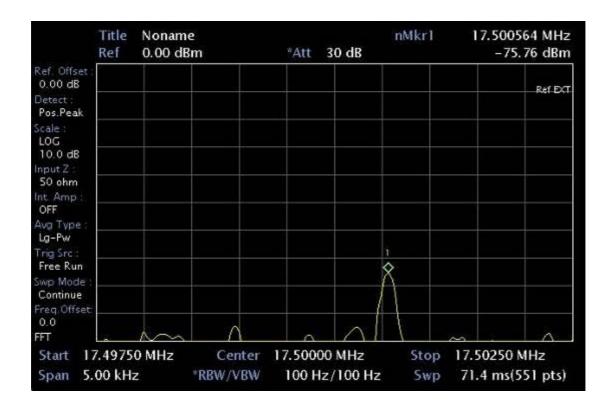
Spurious emissions 3,5MHz

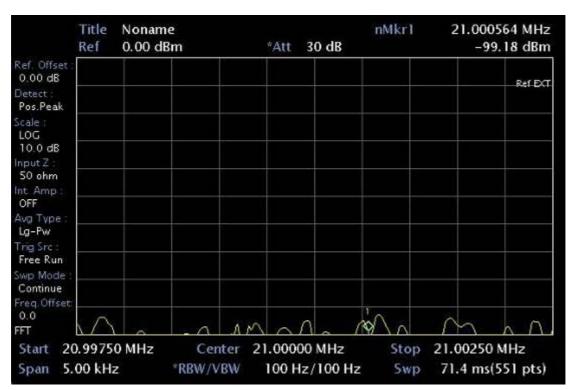


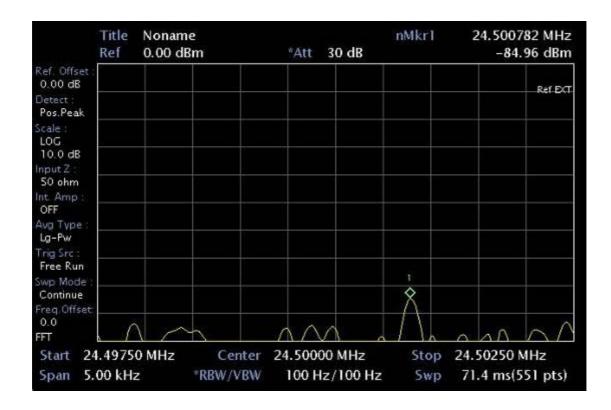


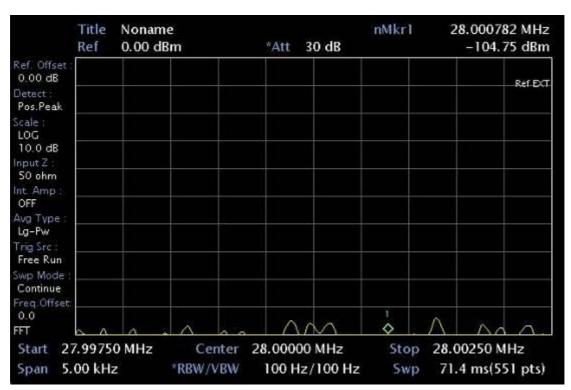


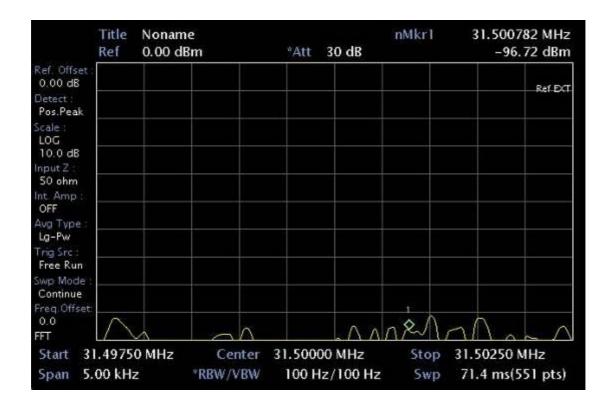


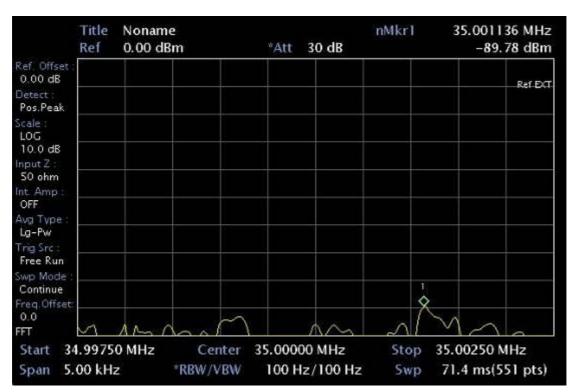




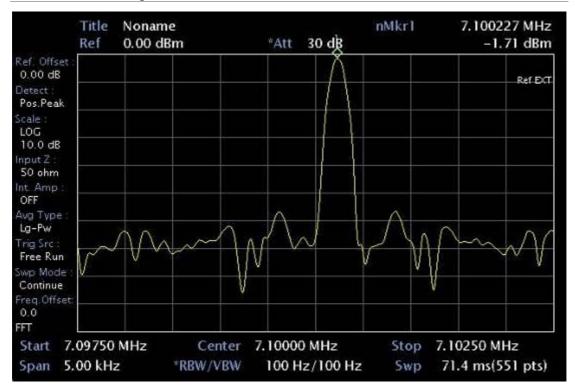


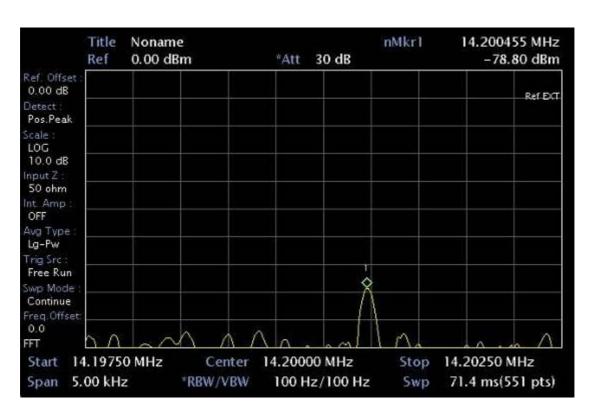


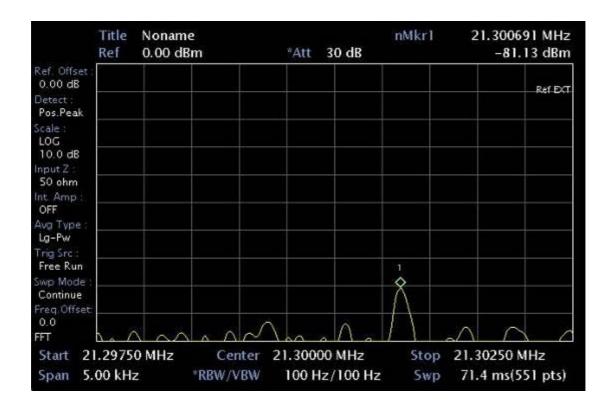


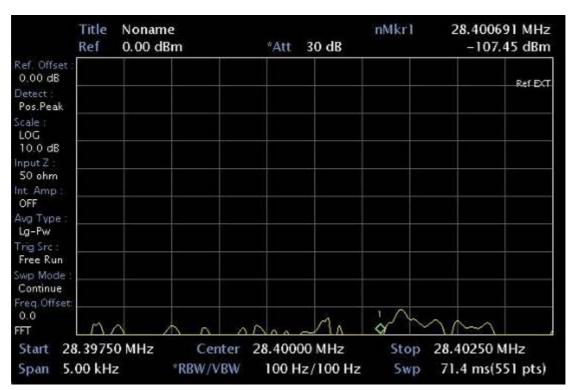


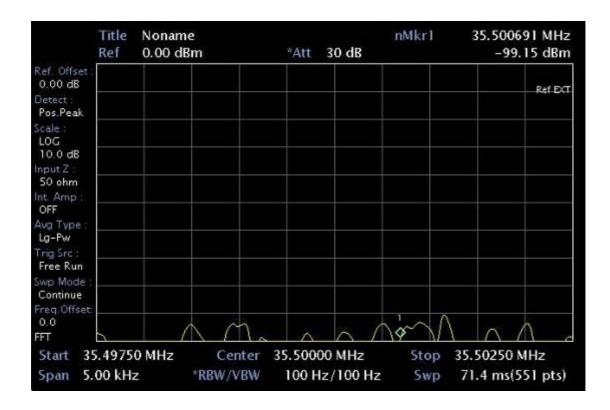
Spurious emissions 7,1MHz

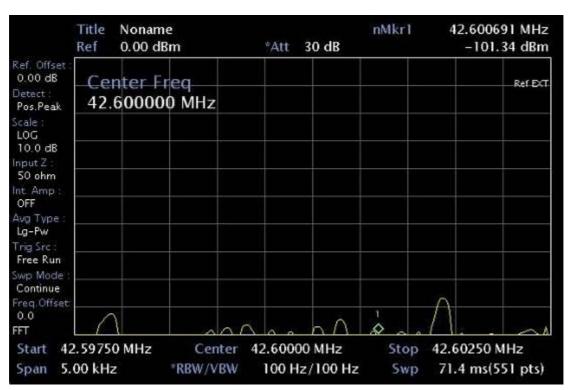


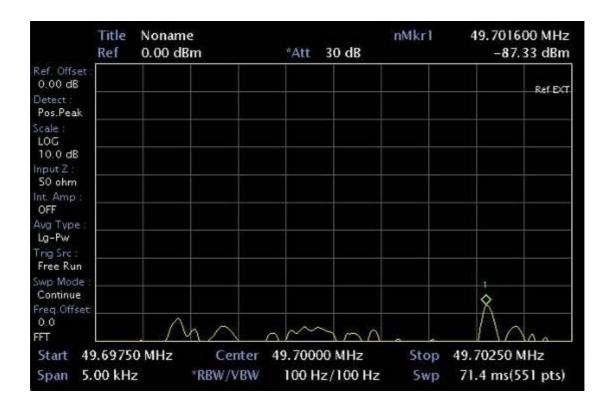


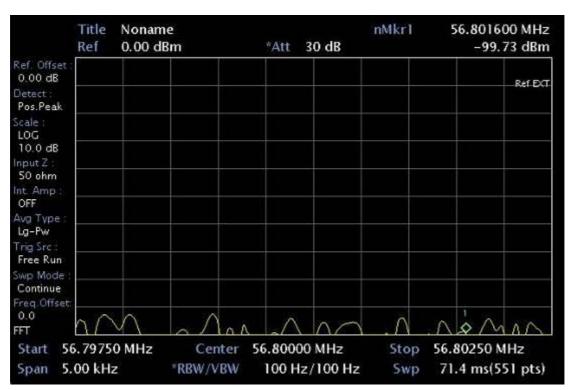


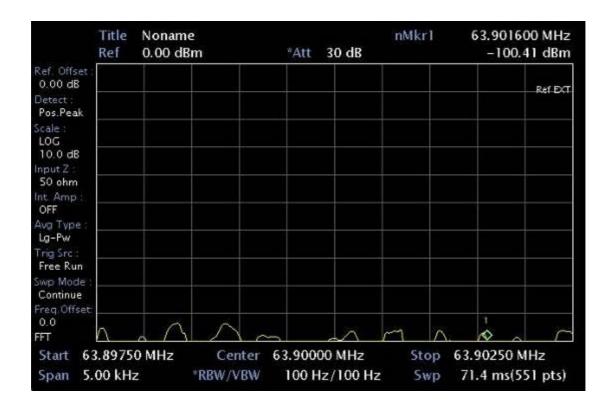


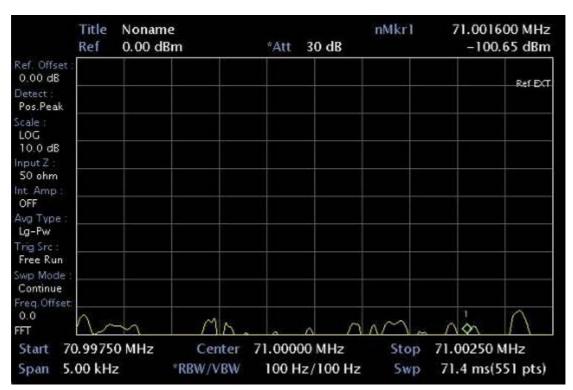




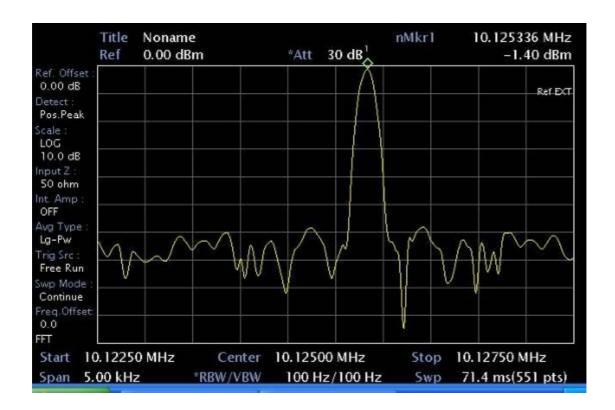


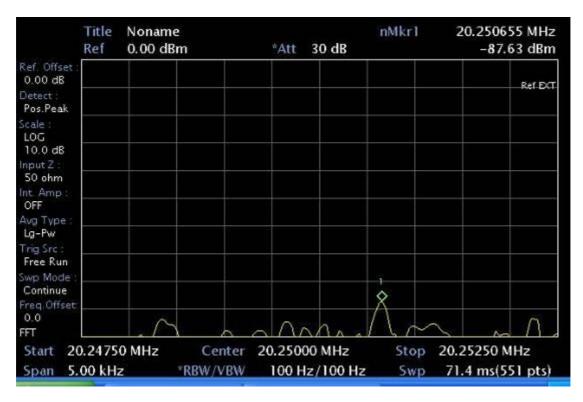


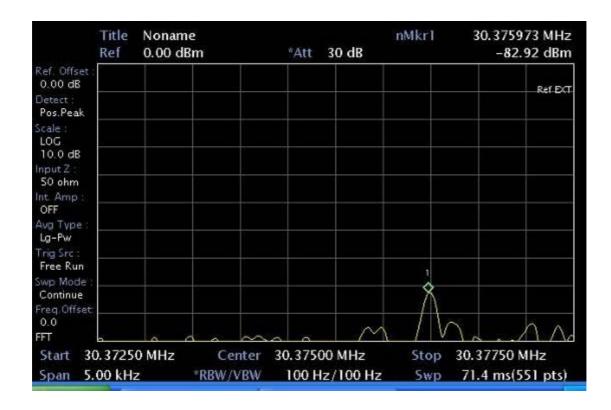


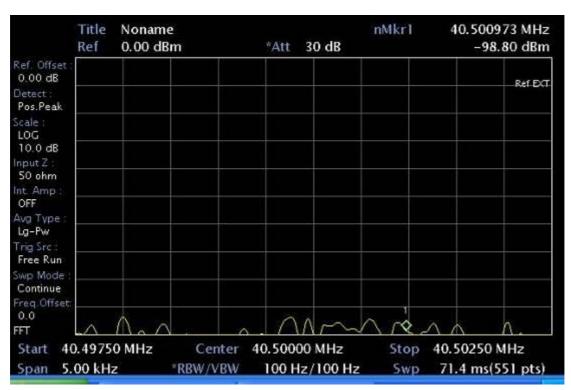


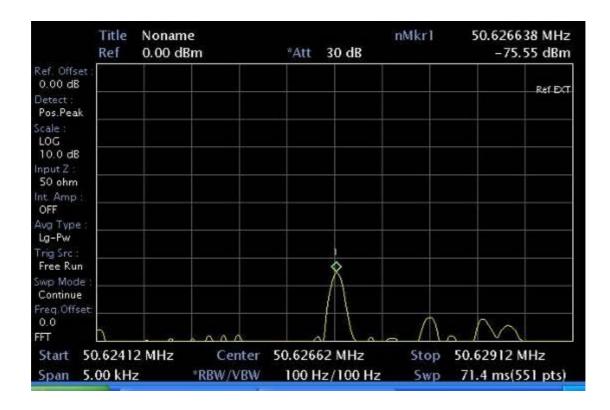
Spurious emissions 10,125MHz

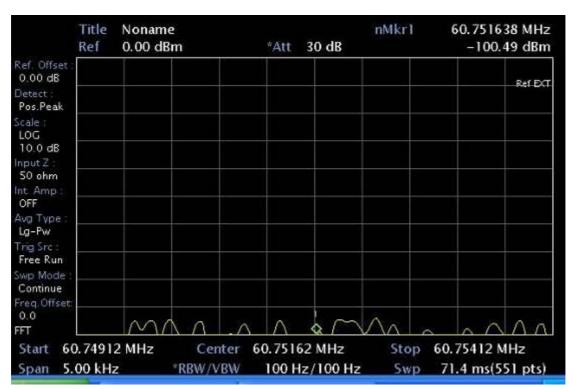


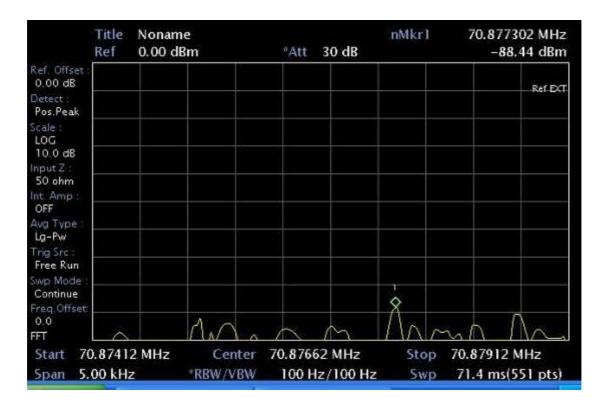


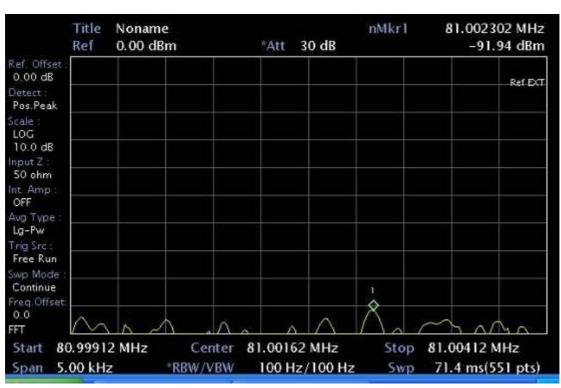


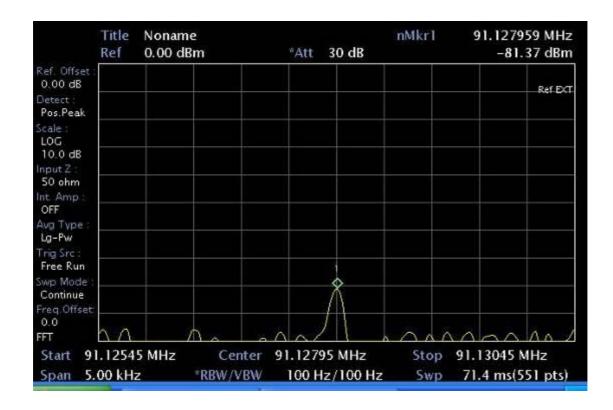


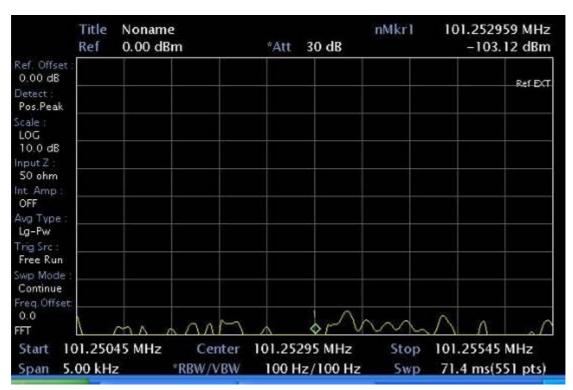




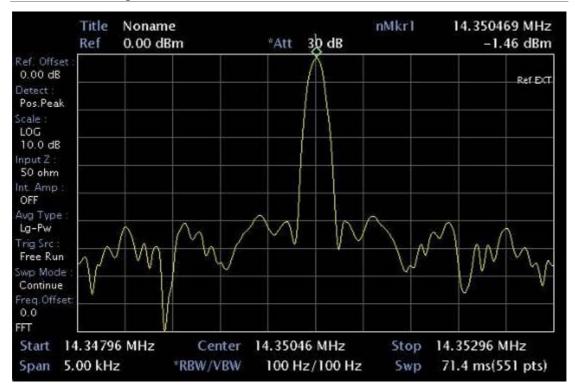


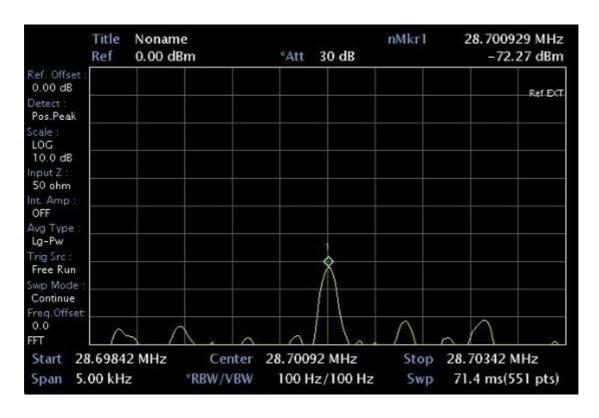


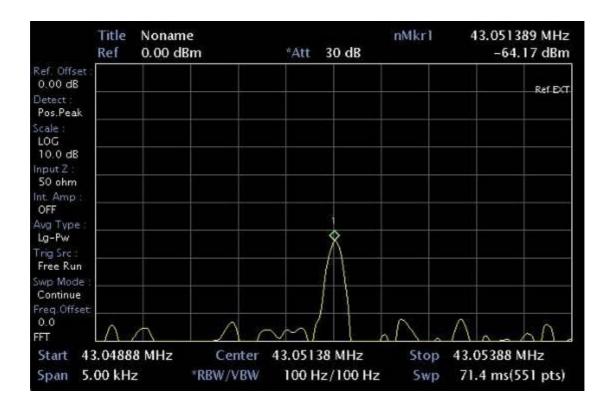


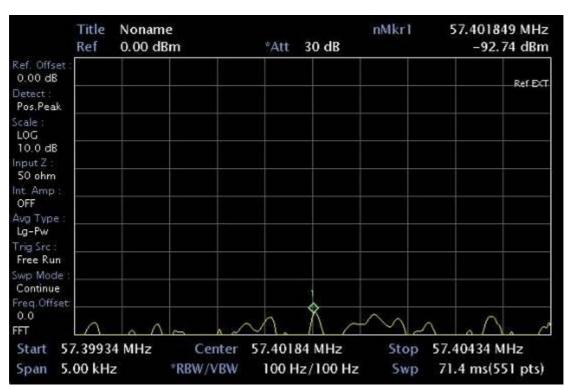


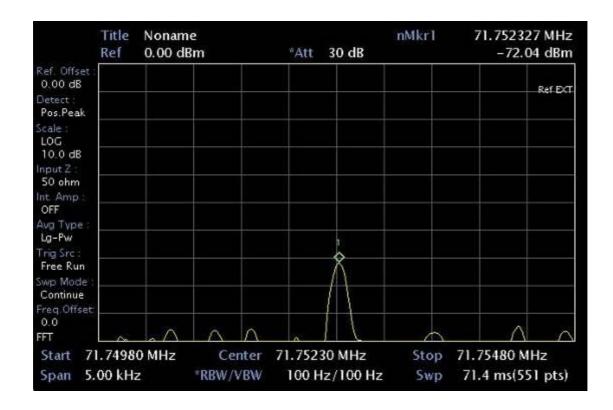
Spurious emissions 14,35MHz

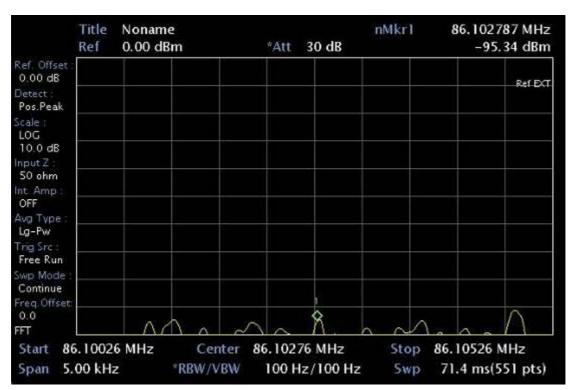


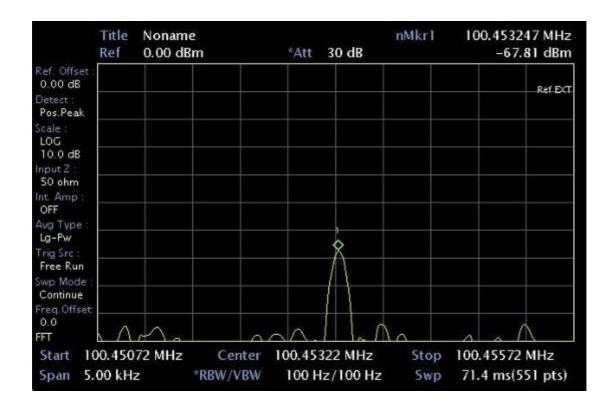


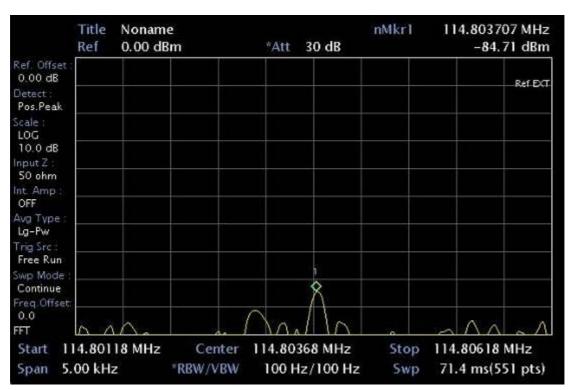


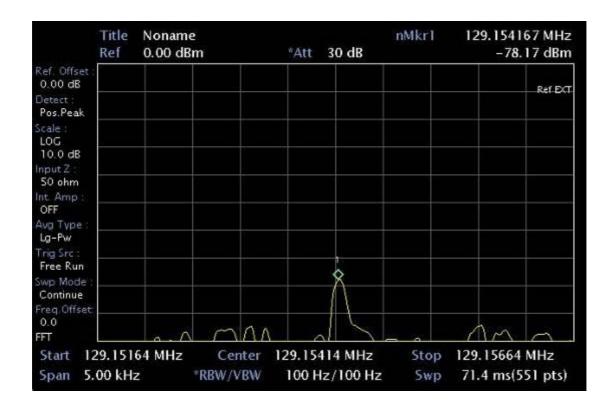


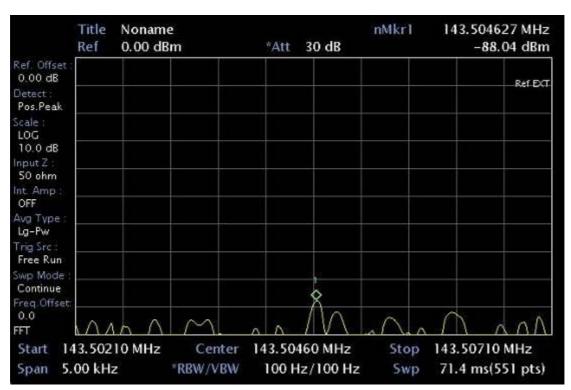




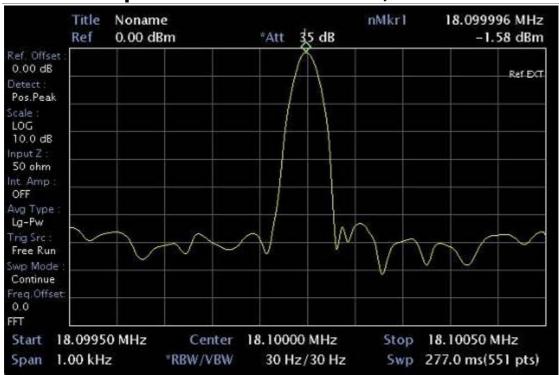




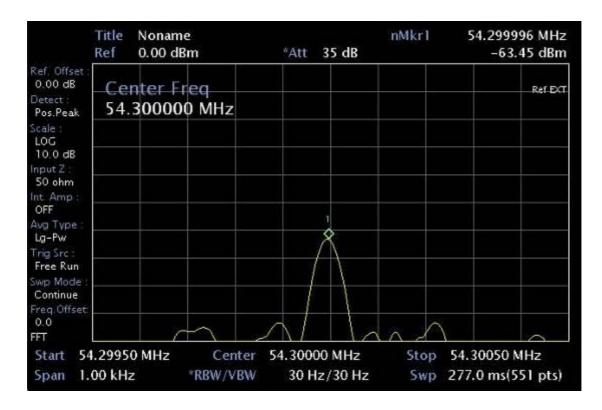


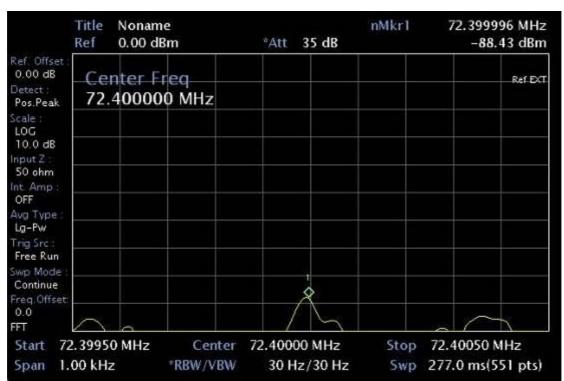


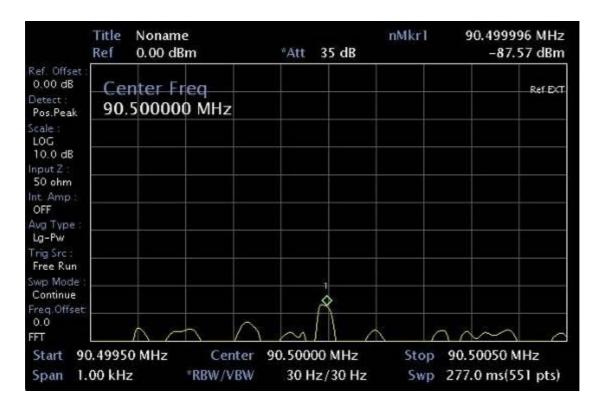
Spurious emissions 18,1MHz

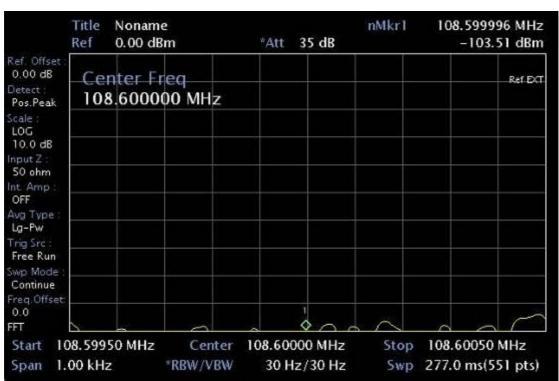


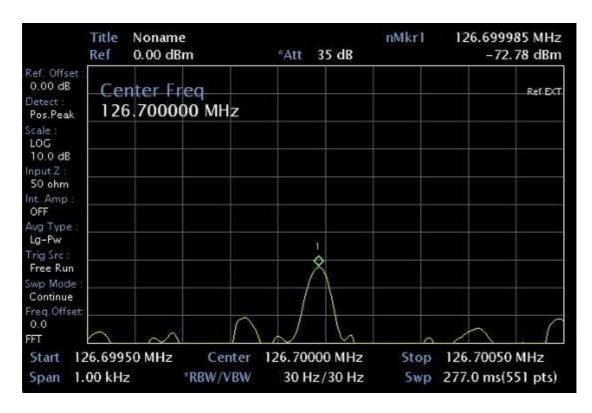




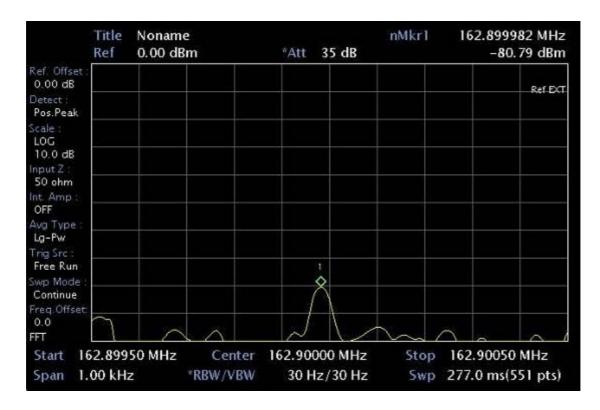


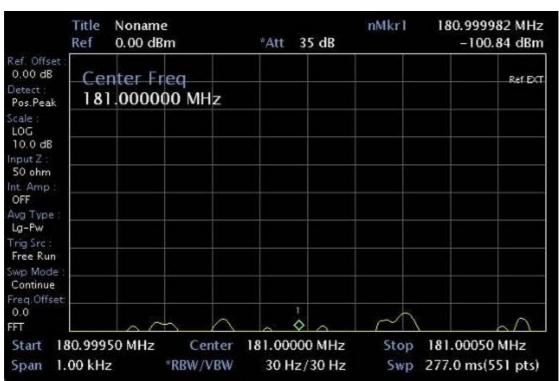




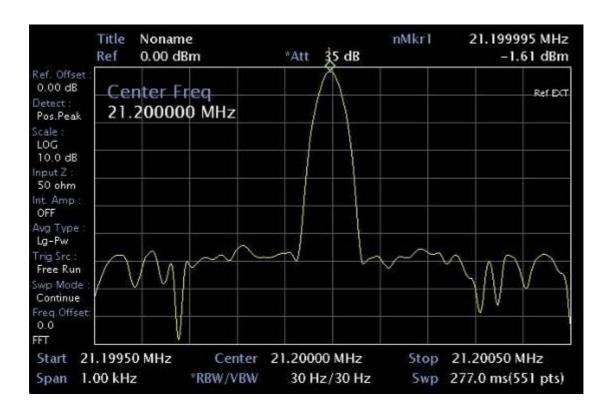


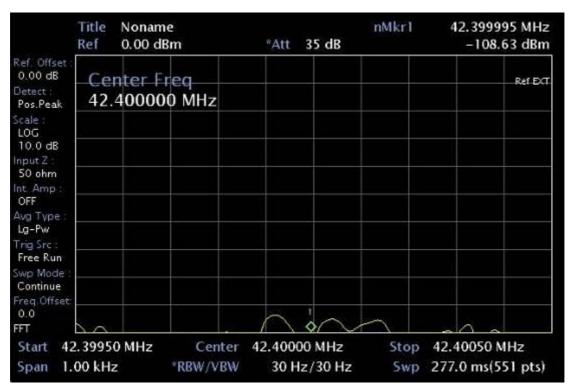


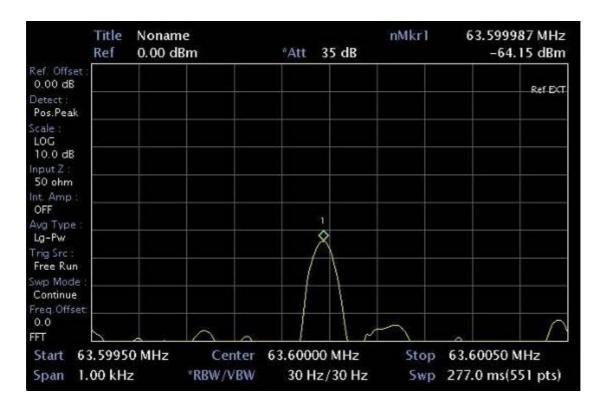


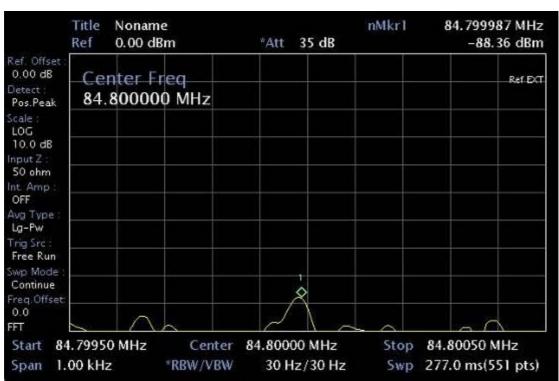


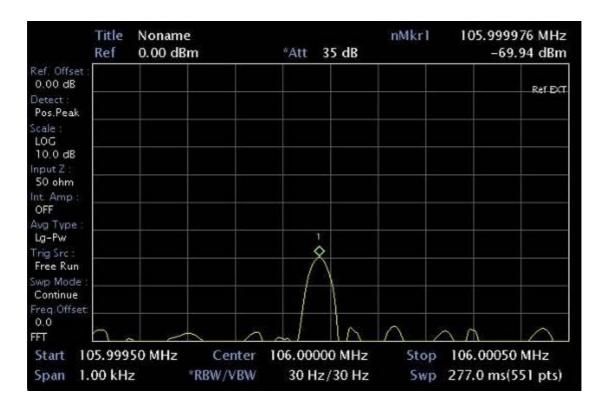
Spurious emissions 21,2MHz

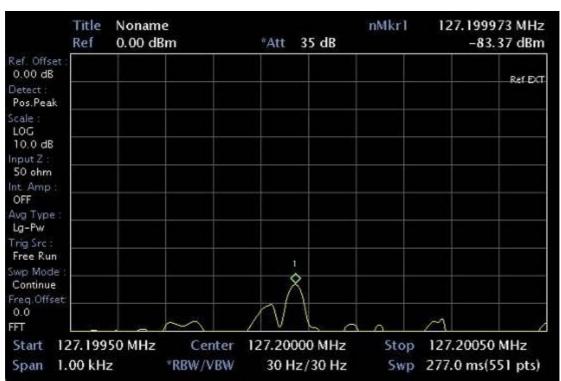




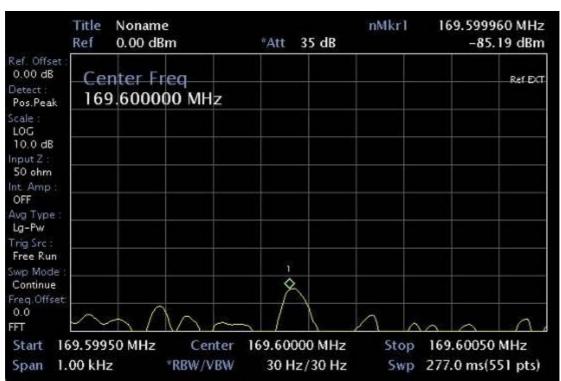


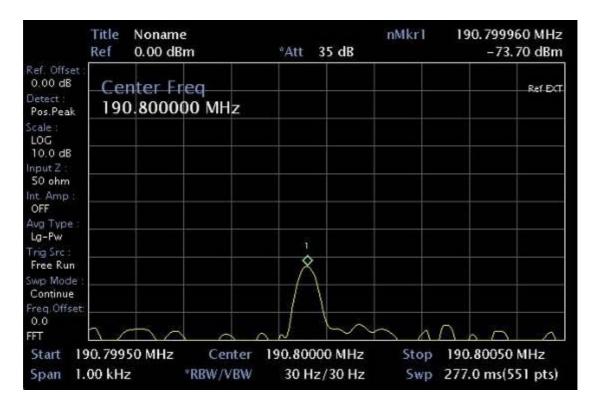


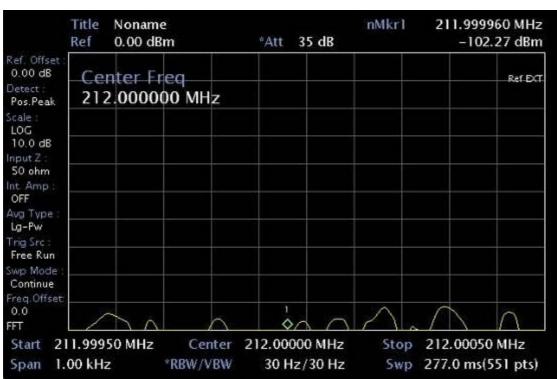




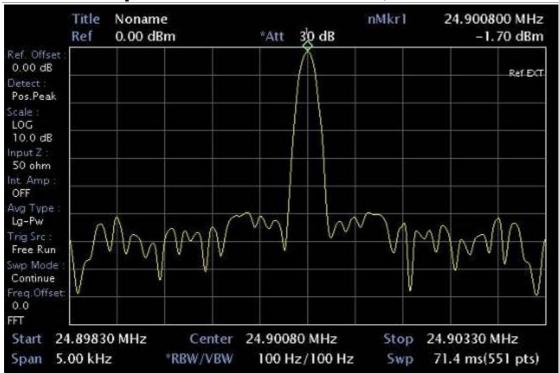


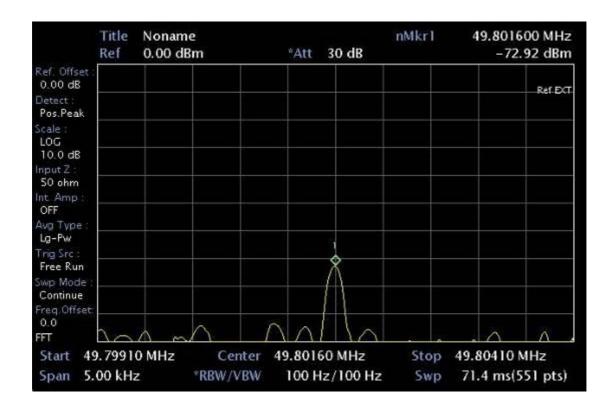


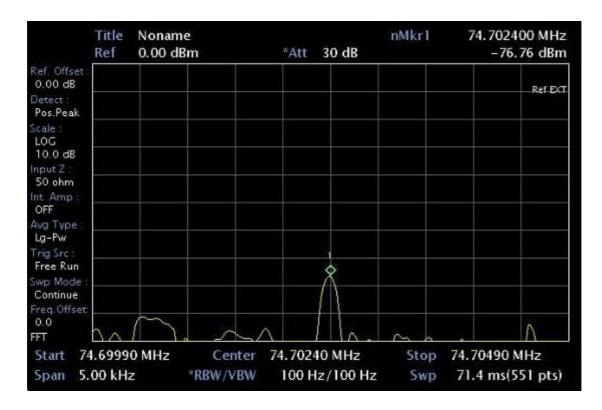


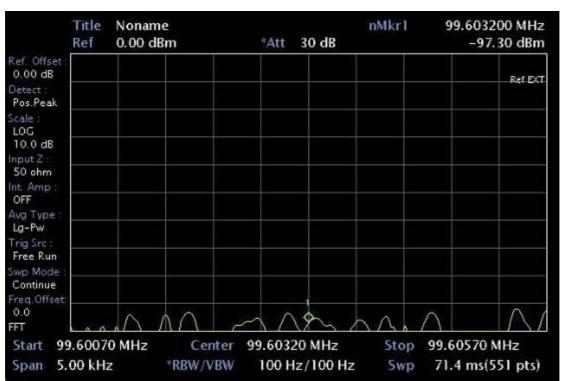


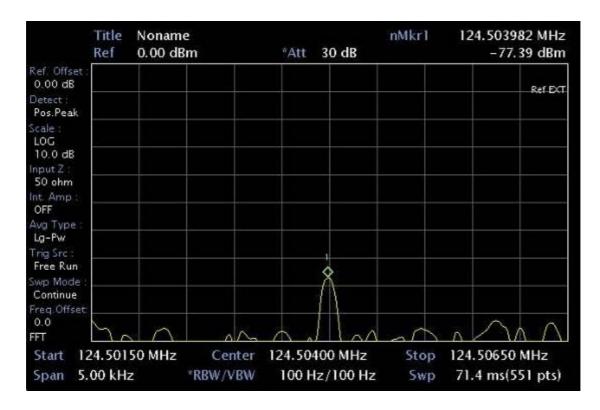
Spurious emissions 24,9MHz

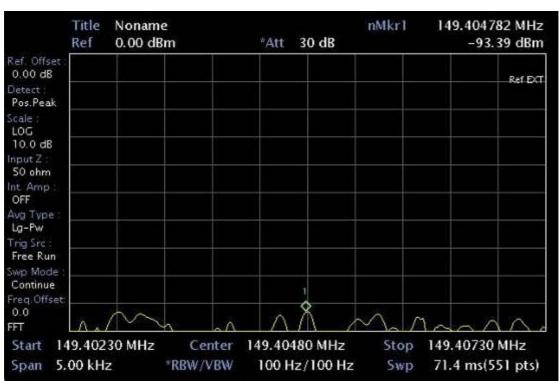


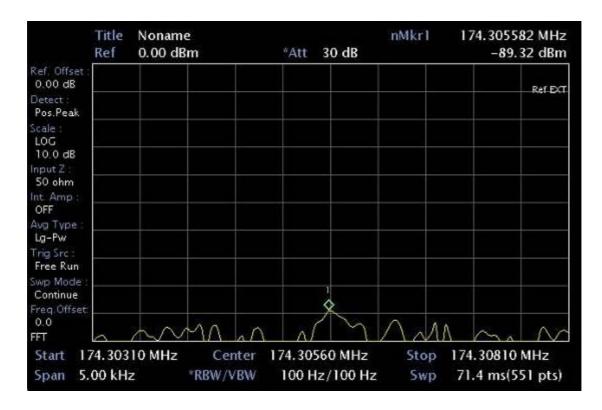


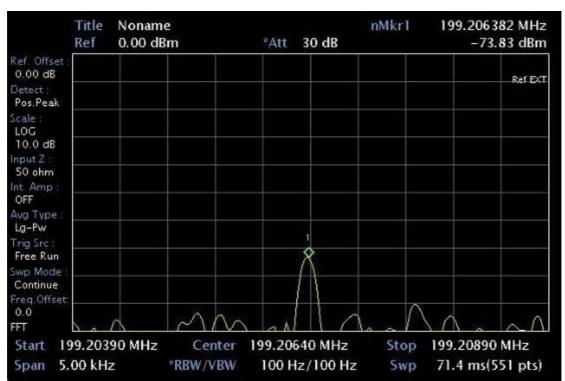


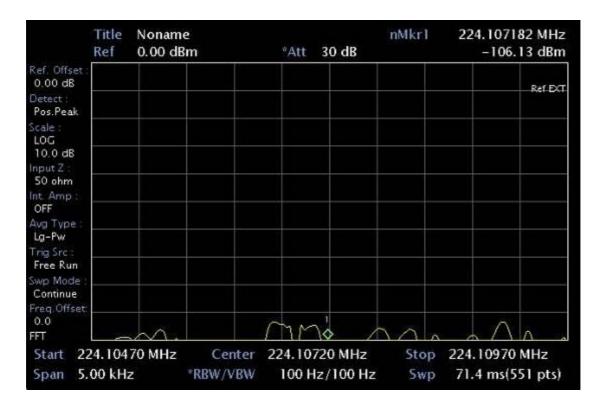


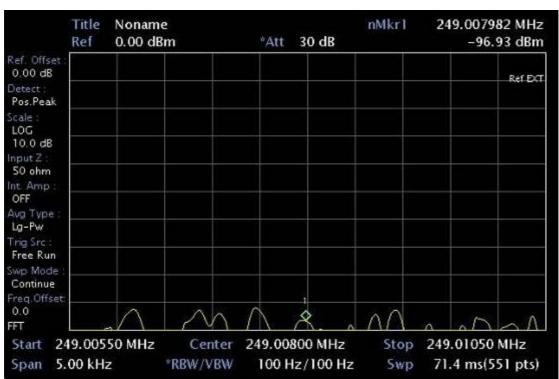




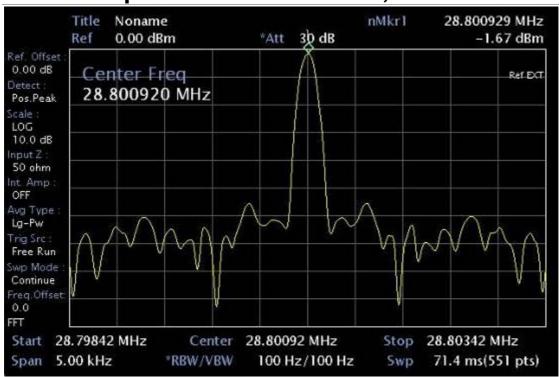


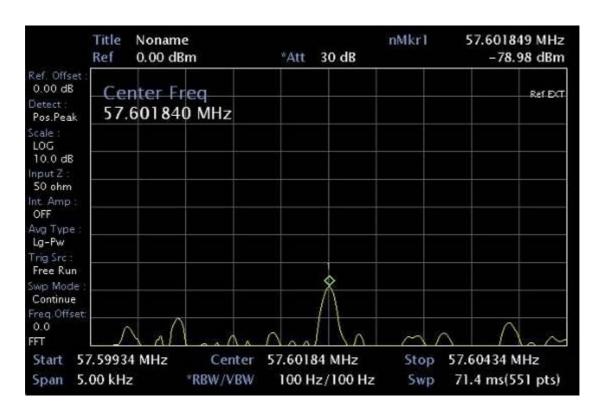


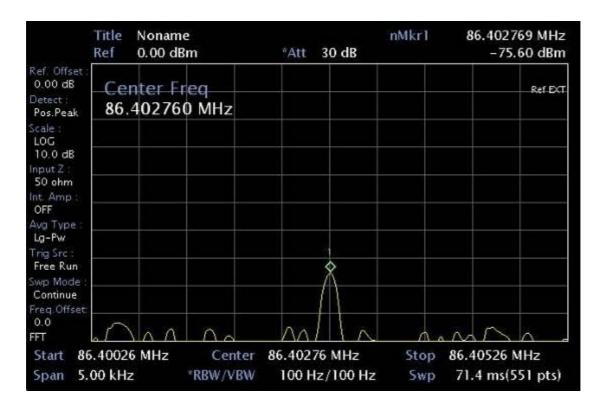


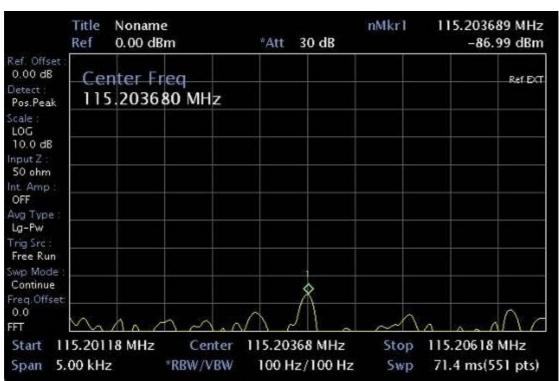


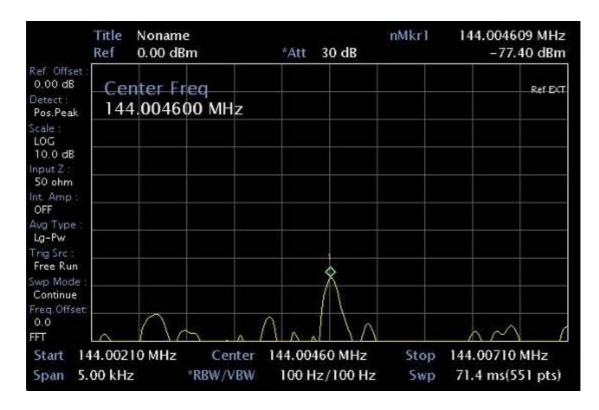
Spurious emissions 28,8MHz

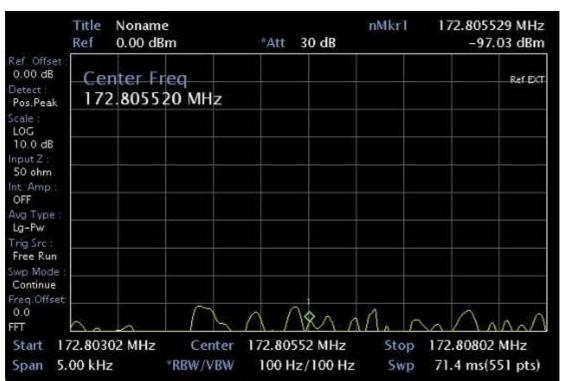


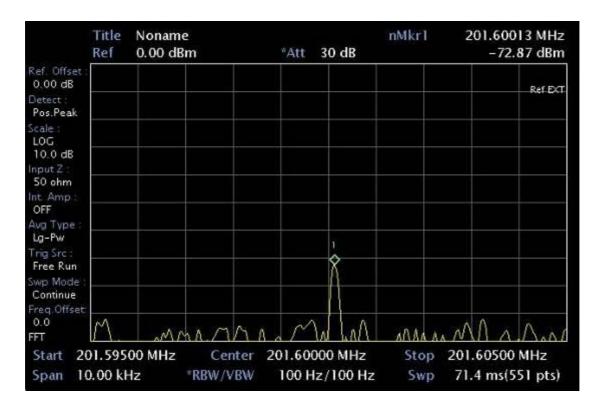


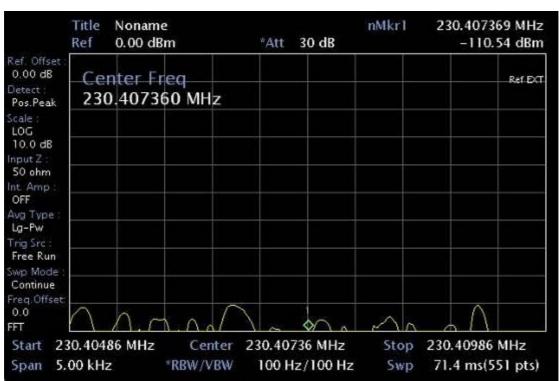


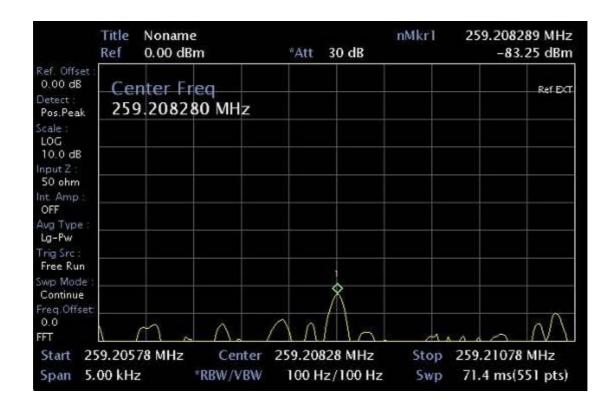


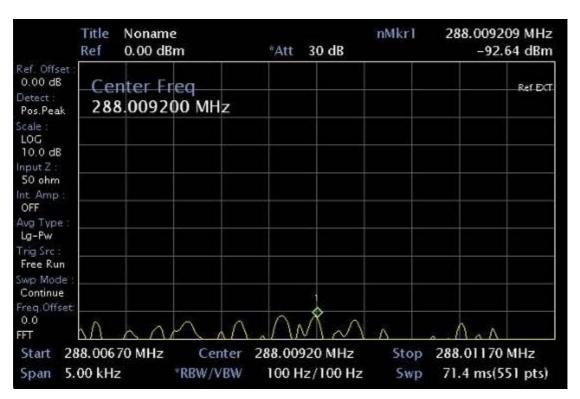












Spurious emissions 52MHz

